

DTCG38-03-R-S00002
COCKPIT PROCEDURES TRAINER

QUESTIONS

1. Is the 5-minute change out a hard requirement?

Yes.

2. Will a rudder system be required?

No; potential for future upgrade.

3. Percentage of training in each version?

HH65 – 65%; HH60 – 35%

4. What, if any GFE will be provided? (Nav database, HH60/HH65 cockpit hardware, aero database, etc.)?

Able to provide: Nav database, HH65/HH60 simulator source code for Emergency Procedure & Systems development, CDU-900 desk top trainer (limited use), materials/manuals listed in Section 3.0 of the specification on CD. HH65 CDU-900 Operational Flight Program source code is proprietary to the OEM. No hardware provided.

5. Are you will to accept a proposal with two trainers instead of one reconfigurable trainer?

No. This is a hard requirement for a re-configurable CPT. PC-based, touch screen, flat panel technology will allow us to insert multiple aircraft on one trainer for maximum utilization and easily update/insert follow-on Deepwater Systems aircraft in a cost effective manner.

6. Would a hybrid device, partly glass/touchscreen and partly hardware satisfy your requirement as long as it remained reconfigurable? Would two training devices be acceptable versus one reconfigurable device?

We are adamant about our requirement for a non-tactile, reconfigurable trainer that is touch screen only (except the cyclic & collective). Our Operational Flight Trainers are going down for eight months for upgrades and we need an interim device for checklists and emergency procedure training that won't sit idle once the OFT's are operational again. The flat panel touch screen technology will allow us to have multiple aircraft on one training device for maximum utilization and allow for cost-effective (software only) insertion of follow-on Deepwater System aircraft into the existing CPT.

7. Please confirm the required delivery date. The Solicitation states February 13, 2004. Is this correct?

Yes, the required delivery to Mobile, AL is February 13, 2004.

8. AVTRACEN-MOBILE currently has an HH60J and HH65 Operational Flight Trainer (OFT) at the aviation training center in Mobile, AL. Given this, can the USCG provide the selected contractor data and software source code from the existing USCG owned OFTs as government furnished information (GFI), to be used (if required) for the Reconfigurable

Cockpit Procedure Trainer?

Yes, The Operational Flight Trainer (OFT) source code for the HH-65/HH-60 is government owned and can be provided for systems and emergency procedures development. The H-60 OFT TACNAV (flight management system) uses an overlay interface to actual aircraft software (emulate) that is proprietary to the OEM. The HH-65 OFT flight management system is the 'A' model MCU that is being replaced with the CDU-900. The Operational Flight Program for the CDU-900 is proprietary to the OEM. Given the criticality of the delivery date and a limited development period, we are prepared to assign subject matter experts (SME's) from each aircraft's training branch (IP's) at the Aviation Training Center dedicated to expedite response to your technical/systems questions thru e-mail and phone calls. Those same SME's could be made available on a limited basis to visit your production facility to beta test and/or critique your software at various key stages in the development cycle.

9. Will a Statement of Work (SOW) be provided that defines the deliverables such as data items, buyer required design and program review meetings, end item testing and acceptance requirements?

The specification document posted with the solicitation serves as the SOW. It is up to each bidder to propose a methodology to ensure the USCG gets the product it has specified within the deadline. It will be evaluated as part of the technical approach. Paragraph 4.11 refers to documentation and para. 5.0 refers to validation. We assume some sort of final design review would be necessary with the government followed by periodic feedback from USCG SME's. We also anticipate that testing will be required once the trainer is installed on-site at ATC to validate functionality as described in para. 5.0. It's important to remember that the training branches need at least a month to familiarize themselves with the trainer, develop any embedded instructional programs and adjust course syllabi before going on-line with instruction. If that instructor familiarization process can be done in conjunction with validation testing, that's also acceptable to us.

10. Will all questions received from the potential suppliers be posted on a website for general access? If so, how can this site be accessed?

Yes, all questions will be posted on the ARSC website under the solicitation number as stated in the synopsis. The website is also listed in the synopsis, but here's the information again.

www.uscg.mil/hq/arsc/index.htm

** After entering the website, click on Contracting, then Solicitations, then Procurement Support Office. Click on "View ARSC Procurement Support Office Solicitations". Scroll down to "DTCG38-03-R-S00002".*

There will be a questions and answers section. Those questions will be answered either by the contract specialist or the technical specialists in Mobile, AL and then forwarded to the website administrator for posting as soon as possible. If you have any other questions, please email them to me and I'll get them answered and returned to you.

11. We have been informed that over the last few years the USCG has contracted for various modifications and upgrades to the existing HH60J and HH65 Operational Flight

Trainers (OFT) located at ATRACEN-MOBILE. Can you provide the following information regarding this work: (a) The name of the contractor(s) who performed this work. (b) The name of the current contractor (if applicable) who is providing the site operation and maintenance on the HH60J and HH65 OFT at Mobile.

(a/b) Our legacy simulators are maintained under the Integrated Modification, Operations, and Maintenance of Simulators (IMOMS) contract. On-site contractor personnel provide both maintenance and modification support. That work has been performed by Aero Simulation Incorporated for the past 4 years. The contract to renew IMOMS services was openly competed recently to small business (solicitation period has expired), and will be awarded on or about 1 May 03. Most of the modification work performed in the past has been small in scale under IMOMS except for a computer rehost of the HH65/HU25 in 1996 & IOS upgrades last year.

12. Reference was made in the Purchase Specification (paragraph 1.0 Background) that the existing HH60J and HH65 OFTs will experience a lengthy down time in CY 2004 due to the ongoing SLEP on these trainers. Can you provide the following information:

(a) Is there an existing contractor performing this work now, or will this be an open competition at some latter date? (b) What degree of software commonality and degree of simulation fidelity is required between the OFTs and the Reconfigurable Cockpit Procedure Trainer?

(a) The USCG needed to upgrade, modify, and refurnish its three legacy flight simulators (OFTs) to address obsolescence, reduce life cycle costs, improve trainer commonality, open systems architecture, and future technology insertion in mind. Using NAWC-TSD, a three phase contract was awarded in 2001 to American Systems Corporation to complete this effort. Phase I is complete. We have combined the Phase II and III requirements which will take our OFTs down for 8 months for upgrade. That is what is primarily driving the CPT requirement and the reason for a hard and fast delivery date. We need a training device that will allow us to teach checklists and critical emergency procedures in the interim while the OFTs are down and still be viable as a CPT for follow-on Deepwater aircraft. (b) None

13. The sound characteristics only specify engines, cautions and warnings. Is there any need for rotor sound?

Rotor sounds are not required.

14. Paragraph 4.0 of the specification states: "...Physical collective and cyclic controls at the right crew position capable of representing the HH65B and the HH60J with switch functionality outlined in Appendices A and B shall be provided as a costed option."

That is correct, the left crew position does not require flight controls.

THIS IS AN UPDATE TO QUESTION 14.....

The answer reads "If the physical flight controls are selected, the controls are to be included on the display panels with the required active functions (i.e. the HH60J collective contingency power switch and the HH65B cyclic flight director slew switch)."

IT SHOULD READ:*If the physical flight controls are NOT selected, the controls are to be included on the display panels with the required active functions (i.e. the HH60J collective*

contingency power switch and the HH65B cyclic flight director slew switch.)

As a clarification on the physical controls, the primary purpose of the physical flight controls is to allow the trainee crew to actuate switches that are inherent to various emergency procedures and flight director functions. Hand flying the aircraft with the physical controls is not a requirement.

15. Paragraph 4.10, Free Flight Simulation, states: “The trainer shall be capable of free flight simulation in the HH65B configuration using aircraft flight director modes and CDU 900 navigation functionality as well as generic cruise flight and non-movement ground operations. As a baseline capability, the HH60J configuration will be capable of generic cruise flight (straight and level) and non-movement ground operations.” While paragraph 4.4, Instrument Approach Procedures states: “The HH65B simulation and displays shall provide functionality to completely and accurately perform the following instrument approach procedures (IAP) to include:...” *Paragraph 4.10 implies that only ground operations and straight level flight operations are required for the CPT, but paragraph 4.4 requires instrument approach procedures, which is not straight and level flight. What are the flight regime requirements for this device?

Instrument approach procedures are only required for the HH65B. The HH65B is required to simulate complete flight director functionality. The HH65B can navigate and conduct instrument approaches solely through use of the CDU 900 and flight director (with associated collective functionality for power changes). The HH65B should be able to operate in “free flight” mode while being controlled by flight director mode selection and collective. The HH60J does not have a flight director capability. The HH60J device should be available for training in a ground mode and flight mode. The HH60J needs to be able to be set to fly straight and level without student intervention because of the limitations of its avionics suite. The device needs to replicate in-flight emergencies but cannot be flown without hands-on controls which are not part of this specification. A similar autonomous mode should be available for the HH65B as well.

16. Several of the malfunctions identified in appendix D for the HH60J imply the requirement for an active control loading system, which is a cost driver:

21. Partial loss of #1 Hydraulic fluid
22. Partial loss of #2 Hydraulic fluid
23. Complete loss of #1 Hydraulic fluid
24. Complete loss of #2 Hydraulic fluid
25. Collective boost servo power piston failure
26. Failure of #1 Hydraulic Pump & Back Up Hydraulic pump
27. AFCS computer power loss
28. Individual AFCS mode failures

*To what extent does the control loading have to replicate these failures to the pilot?

*Does operation of the AFCS require the controls to move in response to AFCS commands?

No control loading is required or desired. The emergencies manifest themselves in ways other than control movement/feedback. No movement is required by operation of the AFCS.

Paragraph 4.7 of the specification states: “Imbedded instruction pertaining to aircraft systems, aircraft emergency procedures shall be an inherent part of the CPT. It shall be capable of providing instructor led training, computer based training independent of an instructor....”

*Would the embedded instruction material be created by the USCG instructional staff and then displayed as required on the Instructor/Student Operating Display?

Yes, the material will be developed by the USCG instructional staff and displayed on the Instructor/Student Operating Display.

Paragraph 4.11 of the specification states: “Documentation shall also include an in-depth course/courseware development manual for use by U.S. Coast Guard instructional staff.”

*Is there a courseware development requirement?

There is a courseware development SYSTEM requirement as well as a requirement for documentation to allow USCG instructional staff to develop courseware for the delivered training device.

17. Paragraph 1.0 of the specification states: “...The service’s full motion flight simulators will experience a lengthy down time in calendar year 2004 due to the ongoing Service Life Extension Programs for the HH65 and HH60 Operational Flight Trainers (OFT).”

*Can you provide information about what is being changed or upgraded with this SLEP?

HH65B: Upgrade from HH65A to HH65B avionics, rehost to PC, visual system upgrade, audio system upgrade, IO system upgrade

HH60J: Install EGI/MDL navigation modification, rehost to PC, visual system upgrade, audio system upgrade

*Does the aircraft configuration that was provided with the solicitation reflect these SLEP changes?

Yes, the delivered training device (HH65B and HH60J configurations) and the post-SLEP full motion trainer configurations will be identical.

18. Paragraph 4.0 of the specification states: “...The HH65B configuration shall provide a fully functional simulation of the HH65B CDU 900G flight management computer.”

*Does this exclude the possibility of using an actual aircraft piece of hardware?

Yes, actual aircraft hardware is neither desired or included as GFE.

*Does this exclude the possibility of re-hosting the CDU 900 hardware?

Rehosting the CDU900 software is not excluded. However, the CDU-900G software is proprietary to Rockwell Collins and will not be provided as GFE by the Coast Guard.

*What is the approach taken in the current training devices?

The Aviation Training Center has cockpit procedures trainers for the HH60J and the

HH65A. The HH60J CPT has manually operated (switches and knobs) systems gauges and warning, caution, advisory lights with no avionics or other system functionality. The HH65A has limited avionics functionality (mission computer with internal model and electronic horizontal situation display) and switches that move only (no associated systems simulation).

19. Paragraph 4.6 of the specification states: "...No radio or inter-crew communications simulation is required."

*Can we assume the instructor will be over the shoulder and not require an intercom to the crew?

That is correct, no intercom is required for the instructor or students.

20. Paragraph 4.0 of the specification states: "1. Traffic Collision Avoidance System (TCAS) "TCAS TEST FAILED" during self test" 2. Traffic Collision Avoidance System (TCAS) In addition, Appendix A – On the HH60 instrument panel drawing, the VSI-TCAS instrument is labeled VSI only.

*Is a full TCAS simulation required for the HH60 or is the simulation limited to just the self-test audio?

The test function of the TCAS is the only required functionality from the HH65B and HH60J VSI/TCAS instruments.

*What level of TCAS simulation is required for the HH65?

Self test display/audio

21. Appendix A. On the HH60 center console drawing, there is a note "HF ALE" along with a picture of the panel.

*What is the functionality (if any) required from this panel? We would assume it should be red since you do not require communication radio simulation.

This panel will be nonfunctional for display only.

22. Is a simulation of the HH65 Data Link Communication System required?

No

23. Which edition of the Navigation Database should be used?

The CDU900 currently accepts editions 6 and 7 of DAFIF.